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CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT AND REMEDIAL INVESTIGATION/FEASIBILITY STUDY MONTHLY PROGRESS REPORT FOR AUGUST 1995

09/10/95

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REPORT

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Department of Energy
Fernald Environmental Management Project
P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155

SEP 19 1995

DOE-1501-95

Mr. James A. Saric, Remedial Project Director
U.S. Environmental Protection Agency
Region V - 5HRE-8J
77 W. Jackson Boulevard
Chicago, Illinois 60604-3590

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT AND REMEDIAL INVESTIGATION/FEASIBILITY STUDY MONTHLY PROGRESS REPORT FOR AUGUST 1995

Enclosure 1 is the consolidated CA/FFCA/FFA and RI/FS Monthly Progress Report, which describes the activities accomplished August 1 through 31, 1995, and planned actions for the period of September 1995. Also, enclosed are diskettes containing Lotus 1-2-3 (Version 2.2) data files of the K-65 hourly data (see Enclosure 2).

If you or your staff should have any questions, please contact me at (513) 648-3139.

Sincerely,

Johnny W. Reising

Johnny W. Reising
Fernald Remedial Action
Project Manager

Enclosures: As Stated

cc w/encs:

K. H. Chaney, EM-423/GTN
B. Skokan, EM-423/GTN
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CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

Introduction

The Consent Agreement (CA) As Amended under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sections 120 and 106(a), the Federal Facility Compliance Agreement (FFCA), and the Federal Facility Agreement for Control and Abatement of Radon-222 Emissions (FFA-CARE) between the U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (U.S. EPA) signed September 20, 1991, July 18, 1986, and November 19, 1991, respectively, require that monthly reports be submitted to the U.S. EPA regarding progress made to meet the provisions of those agreements. This report fulfills those requirements by describing actions undertaken at the Fernald Environmental Management Project (FEMP) during the period August 1 through August 31, 1995, and planned actions for the period September 1 through September 30, 1995.

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CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

WORK ASSIGNMENTS AND PROGRESS

Descriptions of work progress are presented in the following sections and/or enclosures to this report:

- CA Section IX - Removal Actions
- CA Section X - Remedial Investigation/Feasibility Study
- Enclosure A - Waste Water Flows and Radionuclide Concentrations under CA Section XXIII.B
- Enclosure B - FFCA: Initial Remedial Measures and Other Open Actions
- Enclosure C - FFA: Control and Abatement of Radon-222 Emissions
- Enclosure D - Effluent Radiation Discharges to the Great Miami River

CA Section IX. Removal Actions

This section provides an update of activities associated with the implementation of Removal Actions (RAs) at the FEMP during August 1995. Information is presented for each of the Removal Actions identified in the Consent Agreement As Amended.

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CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

REMOVAL ACTION SUMMARY

NO.	TITLE	SCOPE	STATUS
Phase I			
1	Contaminated Water Under FEMP Buildings	Pump water from extraction wells underneath Plants 2/3, 6, 8, and 9. Treat extracted water for volatile organic chemicals and uranium removal before discharge.	Plants 6 & 8 Operational Plants 2/3 & 9 Temp. Inoperable
2	Waste Pit Area Run-off Control	Collect and treat contaminated storm water run-off from the waste pit area.	Operational: 7/30/92 Operation Ongoing
3	South Groundwater Contamination Plume	Part 1 - Install new alternate water supply and transfer to industrial user.	Operational: 12/7/92 Operation Ongoing
		Part 2 - Pump and discharge groundwater from South Plume.	Operational: 8/27/93 Operation RW 5 offline indefinitely
		Part 3 - Install and operate Interim Advanced Waste Water Treatment system to reduce uranium contaminant loading to the Great Miami River.	Operational: 7/30/92 Operation Ongoing
		Part 4 - Conduct groundwater monitoring and institutional controls by sampling private and existing RI/FS wells in the South Plume area and installing homeowner treatment systems.	Ongoing
		Part 5 - Conduct groundwater modeling and geochemical investigation to define the extent of the groundwater plume contaminated with uranium.	Completed: 2/25/94
		OU 2 Dispute Resolution Supplemental Project - Provide for partial treatment of the South Plume discharge to further reduce uranium flow to the Great Miami River.	Operational: 3/31/94 Operation Ongoing
4	Silos 1 & 2	Install bentonite cap to reduce and monitor radon emissions. Provide follow-on monitoring.	Cap Completed: 11/28/91 Monitoring: Ongoing

* Shading denotes completed actions

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CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

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REMOVAL ACTION SUMMARY

NO.	TITLE	SCOPE	STATUS
5	Decant Sump Tank	Periodically remove liquid from K-65 decant sump tank.	Ongoing
6	Waste Pit 6 Residues	Eliminate potential airborne contamination by resubmerging exposed pit material.	Completed: 12/19/90
7	Plant 1 Pad Continuing Release	Stage I - Implement run-on/off control measures.	Completed: 1/17/92
		Stage II - Install new pad.	Completed: 12/4/92
		Stage III - Upgrade existing Plant 1 Storage Pad	Ongoing
Phase II			
8	Inactive Flyash Pile Control	Install plastic chain-link barrier and post warning signs.	Completed: 12/23/91
9	Removal of Waste Inventories	Disposition of low-level waste off-site.	Ongoing
10	Active Flyash Pile Controls	Phase I - Complete interim surface stabilization.	Completed: 6/29/92
		Phase II - Complete active flyash pile controls.	Maintenance: Ongoing
11	Pit 5 - Experimental Treatment Facility	Remove contents, structure, and filter material. Backfill and cap with clay cover.	Completed: 3/20/92
12	Safe Shutdown	Remove uranium and other material from former processing equipment and ship material and equipment off-site.	Ongoing
13	Plant 1 Ore Silos	Dismantle fourteen ore silos and their support structures.	Completed: 11/18/94
14	Contaminated Soil Adjacent to Sewage Treatment Plant Incinerator	Isolate or remove and dispose of contaminated soils from the vicinity of the sewage treatment plant.	Final Report Submitted 11/18/94
15	Scrap Metal Piles	Phase I - Disposition LLW ferrous/non-ferrous scrap metal	Ongoing
		Phase II -	
		IIA - Containerization of scrap copper	Completed: 9/29/92
		IIB - Disposition of scrap copper	Ongoing
16	Collect Uncontrolled Production Area Run-off - Northeast	Collect storm water run-off from the northeast perimeter of the former production area in the Storm Water Retention Basin.	Completed: 8/20/93

* Shading denotes completed actions

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

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REMOVAL ACTION SUMMARY

NO.	TITLE	SCOPE	STATUS
17	Improved Storage of Soil and Debris	Improve storage of existing and future generated soils and debris.	Ongoing
18	Control Exposed Material in Pit 5	Eliminate potential airborne contamination by re-submerging exposed pit material.	Completed: 5/13/93
Phase III			
19	Plant 7 Dismantling	Dismantle and dispose of the Plant 7 structure.	Completed: 11/18/94
20	Stabilization of UNH Inventories	Neutralize, filter and package UNH inventory.	Ongoing
21	Expedited Silo 3	Mitigate the potential release of hazardous waste material by covering and sealing dust collector hopper, removing dust collector, and capping and covering obvious release pathways.	Completed: 2/24/93
22	Waste Pit Area Containment Improvement	Stabilize south berm of Pit 4; regrade drainage ditches along Pits 3, 4, 5, and 6; and resurface road between Pits 3, 4, 5, and 6.	Completed: 7/30/93
23	Inactive Flyash Pile	Conduct field investigation to identify locations requiring material removal.	Completed: 4/30/92
24	Pilot Plant Sump	Remove liquid and sludge from the sump.	Completed: 10/15/93
25	Nitric Acid Tank Car and Surrounding Area	Remove residual contents from tank car and decontaminate and dispose of tank car.	Completed: 10/11/93
26	Asbestos Removals (Asbestos Program)	Mitigate the potential for contaminant and migration of asbestos fibers.	Ongoing
27	Management of Contaminated Structures at the FEMP	Submit an Engineering Evaluation/Cost Analysis for managing contaminated structures. Identify alternatives for managing contaminated structures.	Final EE/CA Approved 6/16/93
28	Contamination at the Fire Training Facility	Remove, decontaminate, dispose, treat or store contaminated structures, equipment, and soil from the former Fire Training Facility.	Ongoing
29	Erosion Control at Inactive Flyash Pile	Mitigate the threat of erosion induced slope failure and discharge of flyash to Paddy's Run.	Final Report Submitted to DOE 2/94 Maintenance: Ongoing
30	Seepage Control at the South Field and Inactive Flyash Pile	Minimize future groundwater contamination by intercepting contaminated seeps that drain from the South Field and Inactive Flyash Pile and infiltrate to the GMA.	Ongoing

* **Shading denotes completed actions**

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Period Ending August 31, 1995

Removal Actions

RA No. 1, Contaminated Water Under FEMP Buildings

Current Month:

The Plant 2 extraction wells remain down awaiting replacement of the hold tank level gauges; the Plant 9 system needs start-up checks prior to operation. The Plant 8 Volatile Organic Compounds (VOC) Treatment Facility and the Plant 6 perched water system continue to operate.

Evaluation of perched water data is currently underway. A determination of extraction well and removal action efficiency will be made following review of the data. The conclusions from this review will be used to initiate discussions with the regulatory agencies regarding the feasibility of continuing with Removal Action 1 or incorporating the removal action into the remedial design/remedial action activities.

Planned Activities:

- Complete repair of the Plant 2 hold tank level gauges (presently in process).
- Remove pumps from designated perched water wells in anticipation of sampling. This includes pumps in Plants 2/3, 6, 8, and 9.
- Collect groundwater samples from perched water wells in accordance with Removal Action 1 and the Project Specific Plan.

RA No. 3, South Groundwater Contamination Plume

Part 1 - Alternate Water Supply

Current Month:

The U.S. Army Corps of Engineers, through an Interagency Agreement (IA), is proceeding with obtaining the necessary documents to transfer easement rights to Albright and Wilson Americas (A&W).

Project A of the Public Water Supply (PWS) is basically complete. Pressure testing of the system is underway.

The analysis of cultural resources and final report for data recovery field work for Project B of the PWS is in progress. Field work has been completed. The final report which includes analysis of the findings will be completed in December 1995.

All contracts for Project B (four contracts) and Project C (two contracts) of the PWS have been awarded. Scheduled completion dates are: October 28, 1995 — Projects B-2, B-4 and C-1; November 4, 1995 — Project B-3; November 11, 1995 - Project C-2; and December 4, 1995 - Project B-1.

Removal Actions

RA No. 3, South Groundwater Contamination Plume

Part 1 - Alternate Water Supply

Current Month (continued):

Bids have been received and opened for Project D of the PWS 500,000 gallon reservoir and remaining waterline to the reservoir on Crosby Road. Awards of these contracts should occur in early September 1995.

Planned Activities:

- Continue proceedings to transfer ownership of the pumping and piping equipment as well as the easement rights to Albright and Wilson in accordance with the agreement of 1990.
- Continue to support Hamilton County Department of Public Works (HCDPW) on installation of the entire PWS, including service connections.
- Complete grant modification request based on actual bids received for the PWS projects.

Part 2 - Pumping and Discharge System

Current Month:

Data compilation and writing of the Design, Monitoring, and Evaluation Program Plan (DMEPP) report for the period beginning January 1, 1995, and ending June 30, 1995, is nearing completion. A draft document will be ready for internal review about September 8, 1995.

Planned Activities:

- Finalize preparation of the DMEPP for submittal to the U.S. EPA and Ohio Environmental Protection Agency (OEPA) on October 1, 1995.

Part 3 - Interim Advanced Waste Water Treatment (IAWWT)

IAWWT Storm Water Retention Basin (SWRB) Unit

Current Month:

Nothing to report.

Planned Activities:

- Continue to operate.

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Removal Actions

RA No. 3, South Groundwater Contamination Plume

Part 3 - Interim Advanced Waste Water Treatment (IAWWT) (continued)

IAWWT Biodenitrification Effluent Treatment System (BDN-ETS) Unit

Current Month:

Unit has ceased operation since the Advanced Waste Water Treatment (AWWT) became operational in January 1995.

Planned Activities:

- None.

Part 4 - Groundwater Monitoring and Institutional Controls

Current Month:

Nothing to report.

Planned Activities:

- Continue to monitor performance of the ion exchange units installed at private residences.
- Evaluate and determine if expansion of a dwelling at one private residence will affect future sampling events.

Operable Unit 2 Dispute Resolution Supplemental Project (Uranium Reduction in FEMP Discharge)

Step 1

Install 200 gallons per minute (gpm) system dedicated to the treatment of a portion of the extracted South Plume groundwater—commonly known as South Plume Interim Treatment (SPIT) System.

Current Month:

Operations continued.

Planned Activities:

- Continue to operate.

Removal Actions

RA No. 3, South Groundwater Contamination Plume

Operable Unit 2 Dispute Resolution Supplemental Project (Uranium Reduction in FEMP Discharge) (continued)

Step 2

Utilization of off-peak Advanced Waste Water Treatment (AWWT) capacity.

Current Month:

An optimum flow of 660 gpm has been achieved at the AWWT using the current configuration. Operational goals have been established whereby the 400 gpm system uses available capacity to routinely process South Plume water daily and the 700 gpm system along with the IAWWT will change over to exclusively process South Plume water during those times when the SWRB is at a low level. Due to unusually heavy rainfall this summer, the 700 gpm system and the IAWWT have been primarily treating storm water. However, in August 1995, both systems were changed over for a short run to treat over five million gallons of South Plume water.

Planned Activities:

- Continue operational goals as described.

Step 3

Elimination of low uranium concentration streams.

Current Month:

Reduced flow occurred due to filtration problems at the AWWT.

Planned Activities:

- Continue to operate.

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Removal Actions

RA No. 3, South Groundwater Contamination Plume

Operable Unit 2 Dispute Resolution Supplemental Project (Uranium Reduction in FEMP Discharge) (continued)

Step 4

Extend operating life/increase capacity of the IAWWT (SWRB).

Current Month:

Piping modifications necessary to allow South Plume water to be treated through the IAWWT are complete. However, due to unusually heavy rainfall, the IAWWT continues to be used to treat storm water as needed.

Planned Activities:

- Treat storm water as needed.

RA No. 7, Plant 1 Pad Continuing Release

Current Month:

The subcontractor began sawcutting/removing deteriorated concrete and installing patch compound in joints the week of August 21, 1995. This is scheduled to be completed the week of October 23, 1995.

Planned Activities:

- Subcontractor to continue sawcutting/removing deteriorated concrete and installing patch compound in joints.

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Period Ending August 31, 1995

Removal Actions

RA No. 9, Removal of Waste Inventories

Current Month:

The volume, in cubic feet (cf), of low-level waste shipped to Nevada Test Site (NTS) in August 1995 was 49,716 (external) and 42,534 (internal). As of September 1, 1995, the FEMP has shipped 690,503 cf (external) and 554,995 cf (internal) to NTS for Fiscal Year (FY) 1995. NTS has received 669,827 cf (external) and 538,207 cf (internal) of FEMP-generated low level waste for burial as of August 27, 1995.

Low level waste volume reduction includes approximately 19,986 drums of residues; 218 boxes and 194 International Shipping Organization (ISO) containers of process area scrap; 15 ISO containers of contaminated trash; 590 boxes and 101 ISO containers of construction debris; and 36 boxes of thorium materials. Inventory reduction volumes include 5,239 containers of legacy trash materials and 1,365 containers of residues shipped to SEG for compaction prior to burial at NTS. Low level waste disposition volumes do not include approximately 61 roll-off bins and 17 ISO containers of Plant 7 steel materials shipped to the ALARON recycling facility in Pennsylvania.

The FY 1995 volume (in cf) dispositioned to NTS is ahead of schedule, primarily due to release of ISO and large metal box shipments of process area scrap materials, and additional resources applied in support of residue material packaging operations. On July 25, 1995, the FEMP received written notification from DOE-NV waiving the external volume limit of 650,000 cf. Therefore, the FEMP is currently restricted to an internal volume limit of 594,000 cf for FY 1995.
Assuming waste material packaging and shipping volumes remain at current rates, the FEMP could reach the internal volume limit by September 15, 1995.

The volume of low level waste materials shipped to NTS in FY-95 per waste stream is detailed in the following table:

WASTE STREAM	INTERNAL VOL. (cf)	EXTERNAL VOL. (cf)
Process Area Scrap	240,739	280,250
Thorium	5,334	6,622
Residues to NTS (FEMP + SEG)	131,016	190,162
Contaminated Trash	17,595	20,235
Construction (Legacy)	44,151	54,395
Construction (Newly Generated)	116,160	138,838

Note : 1 drum equivalent = 7.4 cubic feet

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Period Ending August 31, 1995

Removal Actions

RA No. 9, Removal of Waste Inventories

Current Month (continued):

Treatability Studies are ongoing at Nuclear Fuel Services (NFS) for the Chemical Treatment Project. FERMCO technical staff are currently working with NFS in Erwin, Tennessee, identifying the most effective treatment processes per waste stream. These results will be utilized in full-scale treatment of the twelve waste groups. The first stage of the treatment process is Waste Segregation. Procurement for this phase has been initiated.

The Liquid Mixed Waste Project has completed bulking activities which included pumping the liquid phase out of 2,777 waste containers/drums into five 21,000 gallon bulk storage containers. The bulk containers were then sampled and analyzed for waste acceptance by Lockheed-Martin at the K-1435 TSCA Incinerator. As the analysis is returned and approval to ship is granted by Lockheed-Martin, the waste is pumped from the 21,000 gallon bulk containers into 3,000 to 5,000 gallon tanker trucks, supplied by TSCA, and shipped to K-1435. At this time 2 of the bulk tanks have been emptied and a third is expected to be empty by the end of September 1995.

For the Stabilization Project, treatability studies have been completed by NFS and the Final Report stating results and finding has been issued. The contract to perform Phase I of the stabilization project has been awarded to Perma-Fix, Inc. Preparation of the process work area is approximately ten percent complete., The application for disposal of processed waste at the Nevada Test Site (NTS) has been initiated and is approximately fifty percent complete. The final workplan has been submitted to OEPA for review and comment. Approval to proceed is expected by September 25, 1995. Phase II of the subcontract will be awarded following OEPA approval of the final workplan.

Planned Activities:

- Maintain current levels of effort to complete low-level waste packaging and shipping operations by September 15, 1995.
- Continue shipment of uranium derbies to Oak Ridge, Tennessee.
- Initiate shipment of normal uranium process materials to Allied Signal.
- Additional samples for the Chemical Treatment Project Treatability Studies are scheduled for shipment to NFS on September 11, 1995.
- Continue procurement activities for the Waste Segregation stage of the treatment process of the Chemical Treatment Project.

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CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

Removal Actions

RA No. 12, Safe Shutdown

Current Month:

The Safe Shutdown of Plant 1 was completed. The facility has been turned over to Construction for Phase II Decontamination and Decommission.

The removal of holdup material from Plant 9 continues with work in the Zimlo/water treatment area. While inspecting equipment in the Zimlo area, a slow nitric acid leak was discovered from a tank that records and process history indicated was empty. A temporary repair was made to stop the leak and the tank and associated piping were drained. Stacks and blowers were removed from the roof of the Zimlo area, lathes and machining equipment were cleaned and reusable excess equipment was removed from the Plant 9 pad area.

Approximately eighty mass restricted red drums in the Pilot Plant still need to be moved to an interim storage location. They will be relocated when other higher priority equipment moves are completed.

Utility disconnections were started in Plant 5. Design of the redistribution of power feeding through Plant 5 is in progress.

Planned Activities:

- Continue holdup material removal and utility disconnections in Plant 9.
- Complete the relocation of stored enriched restricted material from the Pilot Plant.
- Continue utility disconnections in Plant 5.
- Continue holdup material removal plan development for Plant 5 and the Pilot Plant.

RA No. 13, Plant 1 Ore Silos

Current Month:

Continue to respond to OEPA comments on the Final Report.

Planned Activities:

- Upon receipt, respond to U.S. EPA comments on the Final Report.

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Period Ending August 31, 1995

Removal Actions

RA No. 15, Scrap Metal Piles

Current Month:

Phase I: None to report.

Phase II: Proposals have been received and evaluations are nearly complete.

Planned Activities:

- Phase I: Final disposition of the waste streams continues to be determined.
- Phase II: Award contract for Engineering Study in early September 1995.

KEY MILESTONES		STATUS	DUE DATE
Phase I -	On-Site Processing Off-Site Processing	Completed Completed	Sept. 30, 1993 March 25, 1994
Phase I -	Submit draft Final Report to U.S. EPA	Completed	October 4, 1994
Phase IIB:	Submittal of Subcontractor's Removal Action Project Plan	Cannot proceed until treatability/engineering study is completed.	Sept. 30, 1993
Phase IIB:	Submittal of Final Report	Cannot proceed until treatability/engineering study is completed.	March 30, 1995

RA No. 17, Improved Storage of Soil and Debris

Current Month:

August 1995 activities included the continuation and completion of the removal and containerization of the residue/debris of the former Scrap Metal Pile (SMP) area (as part of the RA 17 scope). FERMCO labor forces completed containerization on August 2, 1995. A total of one hundred seven (107) small white metal boxes were filled to contain the total volume of all the residue/debris. Subsequent water washdown of the pad followed and the field work for the SMP area was completed on August 4, 1995. The completion of this SMP work, along with the completion of the regrading and seeding of the soil and rubble pile north of Third Street (completed May 18, 1995), constitutes completion of the Amended Consent Agreement Milestone, "Complete Field Activities" for RA 17. This milestone date was August 31, 1995 which has been met.

Removal Actions

RA No. 17, Improved Storage of Soil and Debris (continued)

Planned Activities:

- Conduct a radiological survey of the newly cleaned pad area to confirm that the radiological airborne contamination concern has been eliminated.
- Provide these results into the final report that will be submitted for the completion of RA 17 field activities.

RA No. 19, Plant 7 Dismantling

Current Month:

Processing of the Plant 7 steel continues at ALARON's decontamination facility. ALARON determined that due to the badly damaged steel received the percentage of material that can be recycled is about 30%. All out of scope metal is being placed back into the roll-off boxes (ROBs) for future disposition. FERMCO QA continues to perform surveillances on an as needed basis. Analysis of the waste generated to date indicates that the waste is RCRA non-hazardous.

During the week of August 21, 1995 FERMCO responded to CRU3's audit findings of Scientific Ecology Group's (SEG) readiness assessment. The audit was closed on August 25, 1995.

Planned Activities:

- Determine the most feasible path forward for Plant 7 steel at ALARON.
- Ship the Plant 7 lead to SEG August 24, 1995.
- Process 100% of the Plant 7 lead at SEG and issue the Final Report by September 29, 1995.
- Approve SEG's plans and procedures by the Plant 7 Lead Recycling Team.

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Period Ending August 31, 1995

Removal Actions

RA No. 20, Stabilization of UNH Inventories

Current Month:

The processing rate of UNH material continued to accelerate throughout the month of August 1995. Changes to the operation (i.e., adding lime to complete the raising of the pH from 6 to 7, etc.) and operator experience gained during the August 1995 initial operating period, were major contributors to the increase in processing rate. On the evening of August 21, 1995, all of the approximately 200,000 gallons of UNH material had been removed from the bulk storage tanks. On August 22, 1995, the last UNH from bulk storage was neutralized, and at 8:35 am on August 30, 1995, this material had been filtered. This completed the requirements of the OEPA Director's Final Findings and Orders (DFOs) Section V.2; approximately one month ahead of the required regulatory completion date. The efforts implemented to simplify operation during the delayed start of the transfer operations, combined with the changes to operation discussed above, proved to be even more effective than originally anticipated.

Rinsing of the last storage tanks was completed on August 31, 1995. In addition, approximately 10,000 gallons of MDU material which was left in Tanks F1-609 and F1-610 at the General Sump from the previous UNH processing operation which occurred approximately 2 years ago, was transferred to Plant 2/3. The combined rinsate and leftover MDU slurry was sent to Plant 8 and filtered by September 1, 1995.

A draft of the rinsing procedure utilized and a detailed description of the laboratory results obtained from the first two UNH bulk storage tanks was approved by the OEPA as acceptable for meeting the requirements of Section V.2 of the DFOs. As of the end of August 1995, the only equipment remaining to be rinsed is the piping which was removed to isolate the bulk storage tanks. This material has been temporarily boxed and will be addressed in the next several weeks.

The work plan for Nitric Acid/Residual Waste, an amendment to this removal action, was approved by OEPA on August 23, 1995. Verbal approval was received from USEPA on August 30, 1995. Training of operators for this effort is scheduled during the week of September 4, 1995. Processing of the Nitric Acid portion of this project and performance of the FERMCO readiness assessment for the processing of Tank D1-7 is scheduled to start the week of September 4, 1995.

Planned Activities:

- Begin processing of material and perform training, etc. required and within scope of the Nitric/Residual Waste Project.

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Removal Actions

RA No. 26, Asbestos Removals (Asbestos Program)

Current Month:

The Asbestos Team started asbestos abatement work on August 11, 1995 with work being performed at the Water Treatment Facility and the Clearwell area. Three maintenance work orders were completed.

Planned Activities:

- Continue to estimate quantities of outside pipe line insulation.
- Start asbestos work in Plant 6 along with encapsulation work to begin at the Boiler Plant.

RA No. 28, Contamination at the Fire Training Facility

Current Month:

Validation of the final four analytical data sets was completed in August 1995. Response to OEPA's comments on the Final Report continues.

Planned Activities:

- Transfer the open top tank sized-reduced components to the site storage area.
- Complete response to OEPA comments on the Final Report.

RA No. 30, Seepage Control and Removal of Sediment at the South Field and Inactive Flyash Pile

Current Month:

Start up activities for the seepage control were completed on August 16, 1995, corresponding with the construction schedule and systems are operational. Grading continues around the cleanout manhole. Seeding is expected to start in late September or early October 1995.

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Removal Actions

RA No. 30, Seepage Control and Removal of Sediment at the South Field and Inactive Flyash Pile (continued)

Planned Activities:

- Completion of punch list items.
- Seeding after grading is completed.

KEY MILESTONES	STATUS	DUE DATE
Submit RSE	Completed	October 11, 1994
Submit work plan to DOE	Completed	December 22, 1994
Submit work plan to EPAs	Completed	January 20, 1995
Complete Removal Action	Began Construction April 25, 1995	October 17, 1995

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1.0 Operable Unit 1

Operable Unit 1 (OU 1), as defined in the Amended Consent Agreement, includes Waste Pits 1 - 6, Clearwell, Burn Pit, berms, liners, and soil within the operable unit boundary.

1.1 RI/FS Work Plan

Status:

Complete.

1.2 Remedial Investigation

Status:

Complete.

1.3 Feasibility Study/Proposed Plan

Status:

Complete.

1.4 Treatability Studies

Status:

The Dewatering Excavation Evaluation Program (DEEP) Phase III, Stage 1, Dewatering Well Testing, was completed in Waste Pits 1 and 3 on August 18, 1995. B&B Drilling Company is currently preparing a report for this activity, scheduled to be submitted to FERMCO September 5, 1995. Based upon the results summarized in this report, CRU1 will determine if it is feasible to proceed with Stage 2 dewatering efforts or initiate Phase IV, dry excavation activities.

Issues/Corrective Actions:

None to report.

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1.5 Record of Decision

Status:

Complete.

Issues/Corrective Actions:

None to report.

1.6 RD Work Plan

The Remedial Design (RD) Work Plan identifies the design deliverables, and presents the schedule for their submittal to U.S. EPA (in coordination with OEPA) for the implementation of the selected remedy described in the OU 1 Record of Decision.

Status:

The draft RD Work Plan was submitted to U.S. EPA and OEPA on April 25, 1995 for review, approximately one week ahead of the required submittal date of May 1, 1995. On May 30, 1995 OEPA conditionally approved of the plan. On June 21, 1995, U.S. EPA approved the RD Work Plan without comment. Responses to the OEPA comments and a Final RD Work Plan reflecting changes made to address these comments were prepared and submitted to U.S. EPA and OEPA on July 7, 1995, two weeks ahead of the required submittal date of July 21, 1995.

The RD Work Plan identifies the following preliminary design deliverables for submittal to U.S. EPA and OEPA by October 24, 1995: Plant Facilities Design Criteria Package, Plant Facilities Engineering, Equipment Specifications, Site Improvement Plan, Construction Schedule, Excavation Plan, Site Restoration Plan, and Transportation and Disposal Plan. Conceptual design packages for many of these deliverables were distributed August 28, 1995 for internal review.

A Fact Sheet on the OU 1 RD Work Plan was finalized, printed, and distributed to stakeholders during August 1995. This Fact Sheet was issued pursuant to the Community Relations Plan to explain to the stakeholders the components of the OU 1 design phase and schedules, and to identify opportunities for public involvement during the OU 1 remedial design.

In a letter to U.S. EPA and OEPA dated August 18, 1995, providing a proposal for integration of site-wide remedial planning, DOE requested that the OU 1 Site Restoration Plan be deleted as an OU 1 remedial design deliverable. The letter also stated that the scope of this deliverable would be addressed in a site-wide plan as discussed in the proposal enclosed therein.

Issues/Corrective Actions:

None to report.

Remedial Investigations/Feasibility Studies

1.7 RA Work Plan

The Remedial Action (RA) Work Plan provides the basis for implementation of the Remedial Design Work Plan and includes, but is not limited to, the following: Sampling & Analysis Plan, Quality Assurance Project Plan, Health & Safety/Contingency Plan, Operations and Maintenance Plan, and a plan for meeting permitting requirements.

Status:

The Remedial Action Work Plan is scheduled for submittal to U.S. EPA and OEPA by October 22, 1996, as stated in the Remedial Design Deliverable Schedule submitted as part of the RD Work Plan.

Issues/Corrective Actions:

None to report.

1.8 Planned Activities for September 1995:

- Evaluate B&B Drilling Company's final report on Phase III, Stage 1 dewatering activities. Determine if CRU1 should proceed with Stage 2 dewatering activities or proceed with Phase IV, dry excavation activities. Initiate field activities for the chosen path in September 1995.

- Continue development of preliminary design deliverables so as to provide for submittal to U.S. EPA and OEPA by October 24, 1995.

- Submit change pages for the RD Work Plan reflective of the deletion of the Site Restoration Plan as a design deliverable.

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Remedial Investigations/Feasibility Studies

2.0 Operable Unit 2

Operable Unit 2 (OU 2), as defined in the Amended Consent Agreement, includes the Flyash Piles, other South Field disposal areas, Lime Sludge Ponds, Solid Waste Landfill, berms, liners, and soil within the operable unit boundary.

2.1 RI/FS Work Plan Addendum

Status:

Complete.

2.1.1 RI Field Investigation

Status:

Complete.

2.2 Remedial Investigation

Status:

Complete.

Issues/Corrective Actions:

None to report.

OPERABLE UNIT 2 REMEDIAL INVESTIGATION REPORT — PRIMARY MILESTONES

SCOPE	SUBMIT TO EPAs	RECEIVE FROM EPAs	FINAL DUE DATE TO EPAs	ACTUAL DATE SUBMITTED
Details the nature and extent of contaminants within the OU 2 study area. Estimates the volume of contaminated media and materials. Provides a baseline risk assessment and establishes remedial action objectives.	2/18/94 C	4/22/94	1/21/95	1/20/95

C = Consent Agreement Date

Remedial Investigations/Feasibility Studies

2.3 Feasibility Study/Proposed Plan

Status:

Complete.

Issues/Corrective Actions:

None to report.

OPERABLE UNIT 2 FEASIBILITY STUDY/PP REPORT — PRIMARY MILESTONES

SCOPE	SUBMIT DRAFT TO EPAs	RECEIVE FROM EPAs	SUBMIT FINAL DRAFT TO EPAs	ACTUAL FINAL SUBMITTAL TO EPAs
Describes and analyzes potential remedial alternatives. A comparative analysis will be performed for all alternatives. The Proposed Plan identifies potential remedial alternatives as listed in the FS and presents the preferred alternative to the U.S. EPA and the public.	4/29/94 C	7/5/94 C	8/24/94 C	3/1/95

C = Consent Agreement Date

2.4 Treatability Studies

Status:

None to report.

Issues/Corrective Actions:

None to report.

2.5 RD/RA Work Plan

Status:

The Operable Unit 2 Draft Remedial Design Work Plan report was submitted to the U.S. EPA for review and approval and the OEPA for review on August 4, 1995. The document was transmitted three days ahead of schedule. Comments are due by October 6, 1995.

Planned Activities for September 1995:

Address any comments that may be received on OU 2 Remedial Design Work Plan.

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2.6 Record of Decision

Status:

The Record of Decision (ROD) was signed by DOE and submitted to the EPAs on May 12, 1995. Formal approval was received June 8, 1995 and the Final Operable Unit 2 ROD was submitted to the EPAs and general distribution was completed.

2.7 Pre-Design Field Investigation

Status:

A draft Predesign Investigation Report was submitted to DOE for review on June 12, 1995. DOE comments were incorporated into the report and the document was transmitted to the U.S. EPA and the OEPA ahead of schedule on July 28, 1995. The EPAs are currently reviewing the document.

Planned Activities for September 1995:

- Respond to comments received on Draft Predesign Investigation Report.

2.8 Geotechnical Field Investigation

Status:

All field investigative activities related to the Phase III of the Site-Wide Disposal Facility Field Investigation have been completed. Field testing is ongoing.

A draft Geotechnical Work Plan for on-site clay borrow material, off-site material sources and the OU 2 waste units was submitted for review to both the U.S. EPA and OEPA on July 25, 1995.

Planned Activities for September 1995:

- If received, comments from the EPAs on the draft Geotechnical Work Plan Report will be addressed and incorporated.

2.9 Disposal Facility

Status:

Geosyntec was awarded the Disposal Facility Engineering Design Contract on August 11, 1995.

3.0 Operable Unit 3

Operable Unit 3 (OU 3), as defined in the Amended Consent Agreement, includes the Production Area and production-associated facilities and equipment (including all above-and below-grade improvements) including all structures, equipment, utilities, drums, tanks, solid waste, waste, product, thorium, effluent lines, K-65 transfer lines, waste water treatment facilities, fire training facilities, scrap metal piles, feed stocks, and coal pile.

3.1 Remedial Investigation/Feasibility Study Report

Status:

A streamlined and combined Draft RI/FS Report was submitted internally for review on May 11, 1995. DOE and Internal FERMCO comments on this draft document are being incorporated into the revised document. Additionally, a draft version of the Proposed Plan is being developed for submittal with the RI/FS Report. The Draft RI/FS Report will be submitted to U.S. and Ohio EPA on September 11, 1995.

Issues/Corrective Actions:

None to report.

OPERABLE UNIT 3 REMEDIAL INVESTIGATION/FEASIBILITY STUDY — PRIMARY MILESTONES

SCOPE	SUBMIT TO EPAs	RECEIVE FROM EPAs	SUBMIT TO EPAs FINAL
Details the nature and extent of contaminants within the OU 3 study area. Estimates the volume of contaminated media and materials. Characterizes contamination in the former production area. Develops remedial action objectives and describes and analyzes potential remedial alternatives. A comparative analysis will be performed for all alternatives. The Proposed Plan identifies potential remedial alternatives as listed in the FS and presents the preferred alternative to the U.S. EPA and the public.	09/11/95 C	12/05/95 C	01/24/96 C

C = Consent Agreement Date
F = Forecast Date

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Remedial Investigations/Feasibility Studies

3.2 Engineering Studies

Status:

Working on the draft for the EET Decontamination of Transite Engineering Study, the Kelly Decontamination of Concrete Engineering Study, and the Transite Characterization Engineering Study. The Chemical Leaching Remedy Screening Engineering Study and the Surface Decontamination/Removal Metal Engineering Study Final Reports have been completed.

Issues/Corrective Actions:

None to report.

3.3 Interim Remedial Action

Status:

Prioritization and Sequencing Report - A letter was sent to OEPA on August 18, 1995 in response to their concern regarding the prioritization of the D&D of the Pilot Plant Complex in the final OU 3 Remedial Design Prioritization and Sequencing Report (PSR). OEPA had approved the PSR on July 14, 1995 with the condition of acceptable resolution to their comment on the scheduling of the Pilot Plant Complex. DOE's response, summarized, was that the dismantlement of the Pilot Plant Complex under the accelerated remediation scenario (i.e., the $276 Million Case) would be scheduled to begin in 1999 and, as supported by the OU 5 RI Report, would not allow contamination to migrate to off-site receptors in the interim. To facilitate resolution of this concern, the draft letter was discussed with Tom Schneider (OEPA), who seemed satisfied with the response, prior to formal transmittal.

Dismantlement of MAWS Equipment - DOE-FN has been planning the dismantlement of the MAWS equipment to prepare Plant 9 for the potential start of D&D activities in January 1996. Kim Chaney (EM-423), with concurrence from the Office of Research and Development (EM-53), agreed that the D&D of the MAWS equipment and storage, pending final disposition, is the best path forward.

Representatives of Lockheed visited the FEMP to discuss details for removing their soil washing equipment after Safe Shutdown disconnects utilities to the facility; this is expected to be complete by November 1, 1995. It is believed that because the soil washing test material had very low concentrations of radionuclides, the surface contamination levels on the equipment would likely be below the free release limits in DOE Order 5400.5. Smears will be taken on the interior and exterior surfaces of the equipment for verification prior to dismantlement.

3.3 Interim Remedial Action

Status (continued):

Currently, negotiations are underway for the purchase of the Duratek vitrification and water treatment systems by DOE-HQ. FERMCO has requested a notice to proceed with the dismantlement of these systems by Safe Shutdown as salvageable equipment, pending contractual agreement.

Issues/Corrective Actions:

None to report.

3.4 Planned Activities for September 1995:

- Complete responses to all comments on the first OU 3 draft RI/FS Report and incorporate revisions into the document. Finalize all sections, incorporate last minute changes, and prepare document for printer and distribution.
- Finalize the OU 3 volumes document, which details the methodology and assumptions supporting the OU 3 volumes estimates.
- Complete validation of a small percentage of unvalidated RI/FS radiological data and validate results from the OU 3 leachability study.
- Prepare a presentation for DOE-FN, U.S. EPA, and OEPA on the RI/FS document to facilitate review by the regulators.
- Final report for the Transite Characterization to be completed by University of Cincinnati by the end of September 1995.
- The EET Decontamination of Transite and the Kelly Decontamination of Concrete Engineering Studies to be completed by mid-September 1995.
- Chem Nuclear has arrived on site to set up the equipment for treatment of Thorium Nitrate. The solidification process is scheduled to start on September 12, 1995 and is expected to be completed by the end of September 1995.
- The technical evaluations for the proposals on the Recycling of Copper Engineering Study have been completed and the contract is to be awarded by September 30, 1995.
- The nitric acid and residues from the UNH Project are scheduled to be processed by the end of September 1995. There are four tanks in the Refinery that need to be emptied to complete this project.

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Remedial Investigations/Feasibility Studies

4.0 Operable Unit 4

Operable Unit 4 (OU 4), as defined in the Amended Consent Agreement, consists of Silos 1, 2, 3, and 4, the silo berms, the Decant Sump Tank System, and soil within the operable unit boundary.

4.1 RI/FS Work Plan

Status:

Complete.

4.2 Remedial Investigation

Status:

Complete.

4.3 Feasibility Study/Proposed Plan

Status:

Complete.

4.4 Treatability Studies

4.4.1 Bench Scale Treatability Studies

Status:

Complete.

4.4.2 Pilot Plant Treatability Studies

Status:

The Phase I and Draft Final Phase II Work Plan was submitted to the DOE-FN on August 18, 1995. Currently awaiting DOE approval on the Draft Final Pilot Plant Phase II Work Plan prior to transmittal to the U.S. EPA for information and approval, respectively.

Issues/Corrective Actions:

None to report.

4.5 Record of Decision

Status:

Complete.

4.6 RD Work Plan

Status:

The Remedial Design Work Plan was approved by U.S. EPA on June 15, 1995. Responses to two OEPA comments and changed pages were transmitted to the EPAs on July 27, 1995.

4.7 Planned Activities for September 1995:

- Continue construction of the Phase I Pilot Plant facility.
- Obtain DOE approval on the Phase I and Draft Final Pilot Plant Phase II Work Plan.

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5.0 Operable Unit 5

Operable Unit 5 (OU 5) as defined in the Amended Consent Agreement, includes: groundwater, surface water, and soil not included in the definitions of Operable Units 1 through 4, sediment, flora and fauna.

5.1 Remedial Investigation

Status:

The Remedial Investigation Report was completed in February 1995.

Issues/Corrective Actions:

None to report.

OPERABLE UNIT 5 REMEDIAL INVESTIGATION REPORT — **PRIMARY MILESTONES**

SCOPE	SUBMIT TO EPAs	RECEIVE FROM EPAs	SUBMIT TO EPAs FINAL
Details the nature and extent of contaminants within the OU 5 study area. Estimates the volume of contaminated media and materials. Provides a baseline risk assessment and establishes remedial action objectives.	06/24/94 C	09/12/94 C	11/01/94 C 11/01/94 A

C = Consent Agreement Date
A = Actual Date

5.2 Feasibility Study/Proposed Plan (FS/PP)

Status:

The Feasibility Study Report was completed on July 21, 1995.

The South Field Pumping Test Report was submitted to the EPAs on August 4, 1995. The Project-Specific Plan for Installation of the South Field Extraction System was submitted to the agencies on August 11, 1995. The Project-Specific Plan for the South Field Injection Test was submitted to the U.S. and Ohio EPAs on August 25, 1995 for approval.

Remedial Investigations/Feasibility Studies

5.2 Feasibility Study/Proposed Plan (FS/PP)

Status:

Responses to agency comments on the K_1 Sampling and Analysis Report and example change pages incorporating the comments were submitted to the U.S. and Ohio EPAs on August 18, 1995.

A draft of the Groundwater Reinjection - Great Miami Aquifer Remediation Strategy Report is currently in internal review.

Issues/Corrective Actions:

None to report.

OPERABLE UNIT 5 FEASIBILITY STUDY/PROPOSED PLAN **PRIMARY MILESTONES**

SCOPE	SUBMIT TO EPAs	RECEIVE FROM EPAs	SUBMIT TO EPAs FINAL
Describes and analyzes potential remedial alternatives. A comparative analysis will be performed for all alternatives. The Proposed Plan identifies potential remedial alternatives as listed in the FS and presents the preferred alternative to the U.S. EPA and the public.	11/15/94 C 11/15/94 A	01/16/95 C	02/14/95 C

C = Consent Agreement Date
A = Actual Date

5.3 RCRA Monitoring

Status:

Third quarter RCRA groundwater sampling was conducted July 10 through 19, 1995.

Issues/Corrective Actions:

None to report.

5.4 Treatability Studies

Complete.

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Remedial Investigations/Feasibility Studies

5.5 Record of Decision (ROD)

Status:

The draft ROD was submitted to the U.S. and Ohio EPAs on August 2, 1995. Toward the end of the month the U.S. EPA verbally indicated it would probably not complete its review of the ROD within the 30-day review period. Instead of receiving comments on September 5, 1995, as indicated by the original schedule, comments could be received for up to 30 additional days after September 5, 1995.

Issues/Corrective Actions:

None to report.

5.6 Planned Activities for September 1995:

- Prepare responses to agency comments on the draft ROD.
- Continue preparation of the Remedial Design Work Plan.
- Continue preparation of the Groundwater Reinjection - Great Miami Aquifer Remediation Strategy Report.

6.0 Community Relations

Status:

The Fernald Citizens Task Force presented its final report to the DOE, U.S. EPA, Ohio EPA, FERMCO and the general public during a press conference on August 1, 1995. DOE Headquarters Office of Public Accountability Director Cynthia Kelly received the report on behalf of DOE and provided some remarks about the significant work the Task Force has provided. The final report presents a roadmap for remediation of the Fernald site and contains the Task Force's recommendations on specific areas including future use of the Fernald site, residual risk and remediation levels, waste disposal alternatives and cleanup priorities. The report represents over 18 months of dedicated work by 14 citizens from the Greater Cincinnati area. Copies of the final report are available to the public at the Public Environmental Information Center.

On August 2, 1995 the monthly meeting for the Fernald Envoy Program was conducted. About 45 envoys attended and were briefed on public involvement activities and current issues at the site. The main focus of the meeting was to discuss new initiatives for improving the Envoy Program. The Envoy Advisory Group, consisting of envoys appointed by the manager, submitted a suggestion for improvement -- have envoys start serving as internal liaisons to fellow employees as well as contacts for all their regular external groups and organizations. This recommendation will be presented to DOE management for approval.

On August 8, 1995, approximately 200 people attended the DOE Community Meeting at the Plantation in Harrison, Ohio. This regular, trimester meeting had been publicized to include break-out sessions on the Fernald Citizens Task Force Final Report and the accelerated 10-year cleanup plan. However, due to the notable interest in the radium/silos issue from residents, both local and the greater Cincinnati area, and from the media coverage on the subject, DOE decided to focus most of the meeting on this issue. Covering the meeting were representatives from TV stations WLW, WCPO, WKRC, WXIX, and reporters from the Cincinnati Enquirer, Journal News, Cincinnati Post, and the Harrison Press and National Public Radio.

A presentation was given on the cleanup progress in all operable units and the status of some removal actions, since the March 14 Community Meeting. Information on the accelerated 10-year cleanup plan and the task force's Final Report were available at the meeting (copies can be provided from the Public Environmental Information Center upon request.) Next Dr. Darrell Fisher, a medical physicist at Battelle Pacific Northwest Laboratories in Richland, Washington presented his basis why the radium in Fernald's K-65 silos should be extracted and made available to the medical doctors and scientists researching a cure for some types of cancer.

About 25 people who attended the meeting were randomly selected the next day and asked to participate in a follow-up telephone survey. Respondents unanimously agreed that DOE was correct to change the focus of the meeting because the radium extraction issue needed to be addressed. However, local residents voiced their concerns about safety and delaying cleanup while other respondents who did not live near the site praised Dr. Fisher's work. The transcript of the entire meeting is available to the public at the Public Environmental Information Center.

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6.0 Community Relations

Status (continued):

The *Strategic Plan for the Fernald Environmental Management Project* is being updated to reflect current strategic goals, approaches and actions DOE and FERMCO will take to complete the project mission. Originally developed in September 1994 with input from employees and stakeholders, Fernald is required to review and update the plan annually. Fernald employees and representatives from the Fernald Citizens Task Force, FRESH, and Crosby, Ross and Morgan Township trustees will be asked to review the revised document and submit comments to Gary Stegner, DOE Fernald Area Office Public Information, no later than September 1, 1995. FERMCO will submit the revised plan to DOE-FN by September 30, 1995.

The Center for Disease Control (CDC) and the Agency for Toxic Substances and Disease Registry (ATSDR) are actively conducting public health activities at several DOE facilities. As part of this effort, the agencies are forming a Fernald Health Effects Subcommittee. The purpose of the subcommittee will be to establish a representative and knowledgeable body of citizens to advise CDC and ATSDR on their health research and public health activities related to Fernald.

CDC and ATSDR have received approximately 40 nominations for the Fernald Health Effects Subcommittee. Representatives from CDC and the ATSDR will meet next week to prepare a recommendation for CDC Director Dr. Satcher of who should serve on the committee. After Dr. Satcher approves the list of people, CDC will send invitations to the prospective committee members, who will have two weeks to accept or decline the invitation. This is expected to occur in October 1995. Steve Adams, Fernald Health Effects Subcommittee coordinator, expects the first "official" subcommittee meeting to be held the first week in December 1995. The Fernald Health Effects Subcommittee will be a formal, Federal Advisory Committee Act (FACA) chartered advisory body.

On August 13, 1995, Jack Craig, Director of the Fernald Area Office, and Pam Dunn, local resident, member of FRESH, and member of the Fernald Citizens Task Force, appeared on a local television talk show, called "Newsmakers." The interview subject was "Should the radium in Fernald's K-65 silos be saved for cancer research?" This was the topic at a DOE Community Meeting the previous Tuesday evening that drew the attention of the media and many Cincinnati-area residents. DOE had the interview video-taped and a copy is available to the public at the Public Environmental Information Center.

Several delegates from DOE and FERMCO attended the ER95 Conference in Denver, Colorado the week of August 14, 1995. Some presentations given by the representatives included: The Fernald Envoy Program, The Fernald Citizens Task Force, Accelerating D&D at Fernald, and A Strategy for Effective Management of Regulator Comments on RI/FS Documents.

Issues/Corrective Action:

None to report.

Remedial Investigations/Feasibility Studies

6.1 Planned Activities for September 1995:

- On September 12, 1995, the DOE Ohio Field Office Summit Meeting will be held at Fernald. The Ohio Field Office oversees Mound, RMI, West Valley and Fernald. Also attending representing DOE-HQ will be Tom Grumbly. A tour of the site is scheduled.

- On September 26, 1995, representatives from the DOE Mound Facility in Miamisburg, Ohio will be taking a driving tour of the Fernald Site.

- The regular monthly meeting of the Fernald Residents for Environmental Safety and Health (FRESH) is scheduled for September 28, beginning at 7:30 at the Venice Presbyterian Church in Ross, Ohio.

- The Fernald Citizens Task Force will hold a meeting on September 30, 1995 at the Joint Information Center located at 6025 Dixie Highway, Fairfield, Ohio. The focus of the meeting will be on determining the mission of the Task Force during FY96.

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PERIOD ENDING AUGUST 31, 1995

ENCLOSURE A

WASTE WATER FLOWS AND RADIONUCLIDE

CONCENTRATIONS UNDER CA SECTION XXIII.B

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

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ENCLOSURE A

Introduction

The accompanying Effluent Radiation Reports provide, in accordance with the requirements of Section XXIII.B of the Consent Agreement As Amended under CERCLA Sections 120 and 106 (a), data on the daily waste water flows, radionuclide concentrations, and loadings released to the Great Miami River and an estimate of runoff and radionuclide concentrations to Paddy's Run during August 1995.

Summary - August 1995

The total quantity of uranium discharged from the FEMP to the Great Miami River via Manhole 175 (Outfall 11o00004001) was 1.57 kilograms. The average uranium concentration for the previous 12 months was 0.19 mg/L. This is 21.3% of the Derived Concentration Guide (DOE Order 5400.5) for ingested water.

The total quantity of uranium discharged from the FEMP to the Great Miami River via South Plume/Stormwater Retention Basin/BDN-ETS(Outfall SP3) was 13.63 kilograms. The average uranium concentration for the previous 12 months was 0.052 mg/L. This is 5.8% of the Derived Concentration Guide (DOE Order 5400.5) for ingested water.

There was one discharge from the Storm Water Retention Basin Spillway (Outfall 11o00004002) to Paddy's Run via the Storm Sewer Outfall Ditch in August 1995. The event occurred on August 6, 1995 and resulted in an estimated discharge of 0.97 kilograms of uranium.

Based on 5.61 inches of rainfall in August 1995, the total quantity of uranium discharged to Paddy's Run from uncontrolled areas of the FEMP is estimated to be 15.94 kilograms.

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ENCLOSURE A

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 1IO00004001
001 Total Discharge
Manhole 175 (Effluent to Great Miami River)

DATE: AUGUST 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kgs)	Calculated Total U-238 (pCi/l) (1)
1	0.196	40	36	70	0.05	24
2	0.242	29	29	46	0.04	16
3	0.202	26	20	36	0.03	12
4	0.226	27	31	44	0.04	15
5	0.333	20	86	60	0.08	20
6	0.329	34	170	110	0.14	37
7	0.197	97	130	210	0.16	71
8	0.241	80	120	180	0.16	61
9	0.257	66	42	150	0.15	51
10	0.262	32	42	93	0.09	31
11	0.289	34	34	83	0.09	28
12	0.192	29	49	61	0.04	21
13	0.211	27	34	68	0.05	23
14	0.251	32	41	71	0.07	24
15	0.286	31	51	47	0.05	16
16	0.231	17	46	31	0.03	10
17	0.203	26	33	29	0.02	10
18	0.225	15	36	32	0.03	11
19	0.174	20	140	28	0.02	9
20	0.139	23	55	40	0.02	14
21	0.199	29	42	51	0.04	17
22	0.200	**	**	34	0.03	11
23	0.185	**	**	26	0.02	9
24	0.140	**	**	28	0.01	9
25	0.157	**	**	27	0.02	9
26	0.137	**	**	40	0.02	14
27	0.122	**	**	33	0.02	11
28	0.146	**	**	29	0.02	10
29	0.200	**	**	32	0.02	11
30	0.214	**	**	27	0.02	9
31	0.162	**	**	14	0.01	5
Total	6.548				1.57	

** Analytical results not yet available

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

ENCLOSURE A

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: 001 Total Discharge

DATE: AUGUST 1995

	Flow (MGD)	Total Alpha (pCi/l)(2)	Total Beta (pCi/l)(2)	Total U (ug/l)(2)	Total U (kgs)	Calculated Total U-238 (pCi/l)(1)(2)
Avg.	0.211	26	46	64	0.05	21
Max.	0.333	97	170	210	0.16	71
Min.	0.122	**	**	14	0.01	5

The average uranium concentration for the previous twelve months was 0.19 mg/l. This is 21.3 percent of the Derived Concentration Guide(DOE Order 5400.5) for ingested water.

Comments:

(1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

ENCLOSURE A

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: 1IC00004002
002 Discharge (Overflow) to Storm Sewer Outfall Ditch
Stormwater Retention Basin Spillway (Effluent to Paddy's Run)

DATE: AUGUST 1995

The Stormwater Retention Basin overflowed on August 6. The estimated discharge of 1,600,000 gallons contained approximately 0.97 kg of uranium.

Based on 5.61 inches of rainfall for the month, the uranium discharge to Paddy's Run from uncontrolled areas of the FEMP is estimated to be 15.94 kgs.

E-7184

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

PERIOD ENDING AUGUST 31, 1995

ENCLOSURE B

FFCA: INITIAL REMEDIAL MEASURES

AND OTHER OPEN ACTIONS

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CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

ENCLOSURE B

INTRODUCTION

Enclosure B describes actions undertaken at the FEMP during the period August 1, through August 31, 1995 that are not covered by the reporting requirements of the Consent Agreement As Amended under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Sections 120 and 106(a).

WORK ASSIGNMENTS AND PROGRESS

Descriptions of ongoing work progress are presented in the following sections of this report. The status of ongoing work in support of the Federal Facility Compliance Agreement (FFCA) is summarized in Table 1 of Enclosure B. Completed work previously reported upon has been eliminated for the sake of brevity. In this portion of the report and in Table 1, descriptions of actions are presented in a format consistent with that of the FFCA.

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT AS AMENDED (CERCLA)

1. Initial Remedial Measures

   Section C

   K-65 Silo Project - Status information on the K-65 Silo project normally reported in this section is being provided under Operable Unit 4: Silos 1-4.

2. Remedial Investigation/Feasibility Study (RI/FS)

   Status information on the Remedial Investigation/Feasibility Study (RI/FS) normally reported in this section is being provided separately in accordance with the requirements of Section X of the Consent Agreement As Amended under CERCLA Sections 120 and 106(a).

3. Reports and Record Keeping

   Section B

   The RI/FS Monthly Technical Progress Report for July 1995 was transmitted to the U.S. EPA and OEPA on August 17, 1995, as an integral part of the Consolidated Consent Agreement/Federal Facility Compliance Agreement/Federal Facility Agreement for Control and Abatement of Radon-222 Emissions (CA/FFCA/FFA-CARE) Monthly Progress Report in accordance with the requirements of Section X of the Consent Agreement As Amended.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

ENCLOSURE B

CLEAN AIR ACT (CAA)

Section E

The Quarterly Particulate Emissions Report will now be incorporated into the Annual NESHAP Compliance Report.

RADIATION DISCHARGE INFORMATION

Section A

This information will now be submitted on an annual basis as part of the FEMP Site Environmental Report.

REPORTING REQUIREMENTS

Section B

The Federal Facility Compliance Agreement Monthly Progress Report for July 1995, was transmitted to the U.S. EPA and OEPA on August 17, 1995 as Enclosure B of the Consolidated Consent Agreement/Federal Facility Compliance Agreement/Federal Facility Agreement for Control and Abatement of Radon-222 Emissions (CA/FFCA/FFA-CARE) Monthly Progress Report.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

ENCLOSURE B

TABLE 1

STATUS OF ASSIGNMENTS FOR WORK REQUIRED ON FEDERAL FACILITY COMPLIANCE AGREEMENT ACTIONS

ACTION	DESCRIPTION	COMPLETION TIME AFTER FFCA SIGNED	FY1995 STATUS
CERCLA			
1.	INITIAL REMEDIAL MEASURES		
1.C	Implement radon control plan approved by the U.S. EPA.	------	No longer applicable. Progress on actions to address radon emissions from the K-65 Silos are being reported separately under Section IX-Removal Actions of the Consent Agreement/FFCA Monthly Progress Report.
2.	REMEDIAL INVESTIGATION/FEASIBILITY STUDY		No action required.
2.A	RI/FS work is to be conducted in accordance with the U.S. EPA guidelines.	N/A	
2.B	--No Action Required--	------	Status information on the RI/FS is being reported in accordance with the requirements of Section X of the Consent Agreement As Amended under CERCLA Sections 120 and 106(a).
2.E	Amend and submit revised RI/FS Work Plan to U.S. EPA if deficiencies are found.		Status information on the RI/FS is being reported in accordance with the requirements of Section X of the Consent Agreement As Amended under CERCLA Sections 120 and 106(a).
2.F	Implement tasks described in the approved RI/FS Work Plan		Status information on the RI/FS is being reported in accordance with the requirements of Section X of the Consent Agreement As Amended under CERCLA sections 120 and 106(a).
3.	REPORTS AND RECORD KEEPING		
3.B	Submit monthly RI/FS progress reports.	monthly	The RI/FS Monthly Progress Report for July 1995 was transmitted to the U.S. EPA and OEPA on August 17, 1995.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

ENCLOSURE B

TABLE 1

STATUS OF ASSIGNMENTS FOR WORK REQUIRED ON FEDERAL FACILITY COMPLIANCE AGREEMENT ACTIONS

ACTION	DESCRIPTION	COMPLETION TIME AFTER FFCA SIGNED	FY1995 STATUS
CLEAN AIR ACT			
B.4	Prepare annual progress report installation and replacement of emission control devices.	yearly	The Sixth Annual Progress Report on the installation and replacement of emission control devices was prepared by the Effluent Monitoring and Control Section of the ES&H Division. The report was transmitted to DOE on July 15, 1994.
C.	Provide annual reports to the U.S. EPA per 40 CFR 61.94(c).	yearly	The Annual NESHAP Compliance Report for CY1993 was transmitted to the U.S. EPA on June 29, 1995
D.1	Provide U.S. EPA with yearly stack-testing schedule.	yearly	No stacks related to production were operating in 1994 or to this date in 1995. Due to the permanent shutdown of metals production, resumption of the FFCA Stack Testing Program is unlikely. A proposal is being developed to substitute the NESHAP Subpart H testing/monitoring program for the FFCA Stack Testing. When this proposal is completed it will be formally submitted to U.S. EPA.
D.2	Provide U.S. EPA with stack-test results for stacks tested that year.	45 days	The following test were conducted in May 1995: May 9 — Test contractor tests Laundry stack (6 hour test) May 10 — Test contractor test EIMCO stack (3 hour test) The results of the stack test will be provided to U.S. EPA when received from the testing firm.
E.1	Maintain records of monthly particulate matter emissions.	------	Ongoing.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

ENCLOSURE B

TABLE 1

STATUS OF ASSIGNMENTS FOR WORK REQUIRED ON FEDERAL FACILITY COMPLIANCE AGREEMENT ACTIONS

ACTION	DESCRIPTION	COMPLETION TIME AFTER FFCA SIGNED	FY1995 STATUS
RCRA			
A.1	Conduct a hazardous waste determination on all waste streams.	30 days	Complete. Pursuant to the Proposed Amended Consent Decree, a RCRA waste evaluation was conducted on all identified waste streams pertaining to the PACD.
A.2	Commence a hazardous waste analysis program for materials in the landfill and going to the incinerator.	30 days	Complete. Operation of these units was discontinued and data on the waste which had gone to them was provided in a 30-day FFCA deliverable on August 17, 1986.
A.5	Update the facility closure plan to reflect the year the facility expects to begin closure.	30 days	The Facility closure date is dependent upon closure schedules for individual TSD units as presented most recently in Section I of the RCRA Part B Permit Application transmitted to the Ohio EPA and the U.S. EPA on March 26, 1993 (DOE-1471-93). Facility closure will be completed on a date the last TSD unit is closed.
REPORTING REQUIREMENTS			
B.	Issue monthly progress report of actions taken to ensure compliance with FFCA requirements.	monthly	July's CA/FFCA Monthly Progress Report was transmitted to the U.S. EPA and OEPA on August 17, 1995.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

PERIOD ENDING AUGUST 31, 1995

ENCLOSURE C

FEDERAL FACILITY AGREEMENT:
CONTROL AND ABATEMENT OF RADON-222 EMISSIONS

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

ENCLOSURE C

Introduction

The Federal Facility Agreement for Control and Abatement of Radon-222 Emissions (FFA-CARE) between the U.S. Department of Energy (DOE) and the U.S. Environmental Protection Agency (U.S. EPA), signed November 19, 1991, requires that a monthly report be submitted to the U.S. EPA regarding all steps undertaken in the preceding month to implement Part V of the agreement and that all data generated as a result of those actions be submitted.

Enclosure C fulfills those requirements by describing steps taken at the FEMP during the period August 1, through August 31, 1995, to implement Part V, Radon-222 Control and Abatement Plan, paragraphs 19-33 of the FFA-CARE.

Work Assignments and Progress

In this section of Enclosure C, action descriptions and work progress are presented in a format consistent with that of the FFA-CARE. Immediately following this section are the K-65 Silos Report and the Selected Radon Data Report. Reporting this data is also a requirement included in the U.S. EPA approved Silos 1 and 2 Removal Action Work Plan (Removal Action No. 4).

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

ENCLOSURE C

FFA Part, Paragraph(s)	Description of Commitment	FFA Due Date	Status of Commitment
Part V, 19 & 21	Implement the K-65 Silos 1 and 2 Removal Action in accordance with the approved Silos 1 and 2 Removal Action Work Plan.	12/1/91	Completed.
Part V, 20	Reduce radon-222 to a level As-Low-As Reasonably-Achievable (ALARA) with the goal as specified in the Silos 1 and 2 Removal Action Work Plan.	5/22/92	Completed.
Part V, 22	Submit proposed methodology for estimating radon-222 concentration reductions resulting from completion of the Silos 1 and 2 Removal Action.	Within 60 days of completing removal action; 1/27/92.	Completed.
Part V, 23	Evaluate performance of the removal action and determine whether or not additional actions are needed prior to final remediation.	None specified.	Completed.
Part V, 24, 25, and 33	Demonstrate compliance with NESHAP Subpart Q at the completion of final remediation using a methodology approved by the U.S. EPA. Applicable to: Silos 1, 2, and 3; Waste Pits 1, 2, 3, 4, and 5 and the Clearwell; and any newly discovered radon-222 emission sources.	None specified.	No information to report for July 1995.
Part V, 26	Directly measure radon-222 flux from Waste Pits 1, 2, 3, 4, and 5 and the Clearwell in the RI/FS under the CERCLA Consent Agreement.	None specified.	Radon sampling is complete for Pits 1, 2, and 3. All measurements were below the criteria set by the U.S. EPA. A final report was issued to the U.S. EPA on 6/25/92. A letter was received from the U.S. EPA on 10/16/92 giving approval of the proposed method for measuring the radon flux from Pit 4. The letter also stated that since the Clearwell is water covered, and Pit 5 is nearly 100% water covered, the flux from Pit 5 and the Clearwell may be assumed to be zero.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

ENCLOSURE C

FFA Part, Paragraph(s)	Description of Commitment	FFA Due Date	Status of Commitment
Part V, 26	Include direct measurement data from Waste Pits 1, 2, 3, 4, and 5 and the Clearwell in the RI/FS under the CERCLA Consent Agreement.	None specified.	See above.
Part V, 27	Estimate radon-222 emissions from Silo 3 based upon characterization data; include the estimated radon-222 emission data from Silo 3 in the RI/FS that includes Silo 3 under the CERCLA Consent Agreement.	None specified.	Completed.
Part V, 28	Submit documentation or estimates of current radon-222 emissions from existing but newly discovered sources that contain radium-226 in sufficient concentrations to emit radon-222 in excess of NESHAP Subpart Q prior to final remediation.	Within 30 days of discovery.	No new sources identified.
Part V, 30	Submit methodology for direct measurement or other appropriate means of characterization of the relevant emissions pursuant to paragraph 29 of the FFA.	Within 45 days of the U.S. EPA response pursuant to paragraph 29.	None required.
Part V, 31	Submit results of measurements pursuant to paragraph 30.	Within 30 days of U.S. EPA approval of characterization method.	None required.
Part VI, 31	Submit monthly report on steps undertaken to implement Part V of the FFA-CARE and the data obtained in the preceding month.	20th day of succeeding month.	The progress report being submitted herewith as an integral part of the CERCLA Consent Agreement Monthly Progress Report.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

ENCLOSURE C

Data Reporting Requirements: RA No. 4: Silos 1 and 2

As defined in the Silos 1 and 2 Removal Action Work Plan and the Federal Facility Agreement, data associated with monitoring the effectiveness of the bentonite installation are included in the following tables: the K-65 Silos Report and the Selected Radon Data Report.

The K-65 Silos Report includes data on the following parameters:

- Ambient temperature and pressure near the silos.
- Silos 1 and 2 headspace temperature.
- Silos 1 and 2 differential pressure.
- Silos 1 and 2 radon headspace concentration.
- Silos 1 and 2 headspace humidity

The Selected Radon Data Report includes radon data from the following locations:

- Air monitoring station number 5 (AMS-5)
- Air monitoring station number 6 (AMS-6)
- Pilot Plant
- Background data
- K-65 Monitoring Data (K-65 NW, K-65 SW, K-65 NE, K-65 SE).

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

ENCLOSURE C

The radon data submitted in Enclosure C: Due to its high source strength, unique measurement methods had to be devised to measure radon emissions from this nonstandard source. The data that has been gathered since 1992 is collected by qualified technicians using detailed procedures. This data although not yet verified, serves as a very good qualitative indicator of the integrity of the bentonite sealant layer covering the residues in the silos. Activities have been initiated to enhance the quality and independently verify the data that is being collected.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

ENCLOSURE C

MONTH: AUGUST
YEAR: 1995

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 538704
Cincinnati, Ohio 45253 Hamilton

K-65 SILO REPORT
RADON CONCENTRATIONS
(Daily Summary of Recorded Headspace Concentrations)

REPORT GENERATED: 09/08/95

Daily Statistics	SILO 1 Average	Maximum	Minimum	Std. Dev.	SILO 2 Average	Maximum	Minimum	Std. Dev.
08/01/95	1,560,000	2,650,000	411,000	672,000	5,260,000	5,480,000	4,510,000	160,000
08/02/95	1,760,000	2,690,000	399,000	763,000	5,310,000	5,510,000	4,800,000	114,000
08/03/95	1,740,000	2,680,000	408,000	727,000	5,330,000	5,540,000	5,030,000	135,000
08/04/95	1,650,000	2,680,000	323,000	750,000	5,360,000	5,560,000	4,550,000	129,000
08/05/95	1,230,000	2,700,000	24,500	845,000	5,510,000	5,630,000	5,310,000	58,500
08/06/95	974,000	2,650,000	9,420	1,030,000	5,390,000	5,600,000	5,200,000	130,000
08/07/95	1,610,000	2,730,000	342,000	754,000	5,420,000	5,570,000	5,250,000	89,200
08/08/95	1,780,000	2,720,000	270,000	719,000	5,390,000	5,490,000	5,140,000	80,000
08/09/95	1,690,000	2,720,000	245,000	796,000	5,280,000	5,470,000	4,600,000	125,000
08/10/95	1,740,000	2,720,000	380,000	717,000	5,330,000	5,500,000	5,080,000	125,000
08/11/95	1,780,000	2,740,000	428,000	683,000	5,290,000	5,470,000	5,050,000	110,000
08/12/95	1,880,000	2,740,000	323,000	734,000	5,270,000	5,440,000	4,930,000	107,000
08/13/95	1,960,000	2,760,000	414,000	685,000	5,290,000	5,450,000	5,060,000	100,000
08/14/95	1,760,000	2,740,000	273,000	730,000	5,300,000	5,480,000	4,990,000	120,000
08/15/95	1,850,000	2,780,000	344,000	760,000	5,330,000	5,520,000	4,660,000	125,000
08/16/95	1,890,000	2,790,000	510,000	752,000	5,350,000	5,510,000	5,120,000	111,000
08/17/95	1,820,000	2,760,000	375,000	673,000	5,350,000	5,540,000	5,010,000	128,000
08/18/95	1,680,000	2,800,000	396,000	689,000	5,370,000	5,530,000	4,520,000	161,000
08/19/95	1,670,000	2,780,000	274,000	728,000	5,390,000	5,550,000	5,190,000	108,000
08/20/95	1,400,000	2,610,000	259,000	695,000	5,380,000	5,580,000	5,090,000	133,000
08/21/95	1,220,000	2,580,000	108,000	764,000	5,370,000	5,560,000	5,160,000	90,900
08/22/95	469,000	1,940,000	41,600	405,000	5,400,000	5,650,000	4,860,000	162,000
08/23/95	1,160,000	2,500,000	235,000	665,000	5,460,000	5,690,000	5,240,000	123,000
08/24/95	1,450,000	2,750,000	213,000	864,000	5,450,000	5,690,000	5,200,000	157,000
08/25/95	804,000	2,340,000	126,000	555,000	5,340,000	5,700,000	5,040,000	163,000
08/26/95	1,250,000	2,500,000	195,000	634,000	5,430,000	5,670,000	5,120,000	156,000
08/27/95	950,000	2,440,000	212,000	559,000	5,350,000	5,650,000	4,920,000	192,000
08/28/95	992,000	2,640,000	220,000	663,000	5,320,000	5,570,000	4,900,000	140,000
08/29/95	1,520,000	2,760,000	291,000	769,000	5,300,000	5,560,000	4,990,000	150,000
08/30/95	1,930,000	2,890,000	246,000	883,000	5,320,000	5,550,000	5,040,000	151,000
08/31/95	1,590,000	2,640,000	386,000	626,000	5,290,000	5,530,000	4,890,000	190,000

Grab Samples of Headspace

Date:	SILO 1 Concentration	SILO 2 Concentration
08/03/95	2,759,000	3,360,000
08/07/95	1,477,000	4,289,000
08/10/95	303,000	3,249,000
08/14/95	890,000	4,080,000
08/17/95	3,077,000	3,526,000
08/21/95	207,000	4,120,000
08/24/95	3,311,000	3,329,000
08/28/95	304,000	4,108,000
08/31/95	2,710,000	3,284,000

Notes:
1. All values reported in pCi/L.
2. Continuous data reported to three significant digits to remain consistent with the calibration data.

* Partial data loss due to printer failure (08/20/95, 19:30 to 08/21/95, 09:22).

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

ENCLOSURE C

MONTH: AUGUST
YEAR: 1995

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 538704
Cincinnati, Ohio 45253 Hamilton

SELECTED RADON DATA REPORT
(Monthly Summary of Selected Sampling Locations)

Daily Averages	AMS #5 (pCi/L)	AMS #6 (pCi/L)	PILOT PLANT WAREHOUSE (pCi/L)	BKGD-1 (Fairfield) (pCi/L)	BKGD-2 (Miamitown) (pCi/L)
08/01/95	1.9	1.3	1.5	1.1	1.0
08/02/95	1.2	0.7	1.0	0.8	0.8
08/03/95	2.1	1.3	1.4	0.9	1.0
08/04/95	1.6	1.2	1.4	0.7	0.9
08/05/95	1.0	0.7	1.0	0.8	0.7
08/06/95	0.8	0.3	0.8	0.6	0.5
08/07/95	1.0	0.6	1.0	0.7	0.7
08/08/95	0.9	0.5	0.9	0.6	0.7
08/09/95	0.9	0.5	0.9	0.7	0.7
08/10/95	0.9	0.5	0.8	0.7	0.6
08/11/95	1.2	0.8	1.1	0.8	0.8
08/12/95	1.3	0.9	1.1	0.8	0.8
08/13/95	1.7	1.1	1.0	0.8	0.9
08/14/95	1.5	1.0	1.2	0.9	0.9
08/15/95	1.8	1.2	1.3 (a)	1.0	0.9
08/16/95	1.7	1.1	1.3	1.1	1.1
08/17/95	1.6	1.1	1.3	1.0	1.1
08/18/95	1.4	1.0	1.2	0.9	0.9
08/19/95	1.4	0.9	1.1	0.6 (b)	0.8
08/20/95	1.5	1.1	1.3	(b)	0.9
08/21/95	1.9	1.3	1.5	(b)	1.1
08/22/95	1.4	1.0	1.2	(b)	0.9
08/23/95	1.5	1.0	1.2	(b)	0.9
08/24/95	1.8	1.2	1.5	(b)	1.1
08/25/95	1.5	0.8	1.1	(b)	1.0
08/26/95	1.9	1.2	1.3	(b)	1.0
08/27/95	1.9	1.3	1.4	(b)	1.1
08/28/95	1.5	0.9	1.1	(b)	1.0
08/29/95	1.8	1.4	1.6	(b)	1.2
08/30/95	2.0	1.3	1.6	0.5 (b)	1.1
08/31/95	2.2	1.4	1.5	1.1	1.1

Monthly Statistics of Daily Averages:	AMS #5 (pCi/L)	AMS #6 (pCi/L)	PILOT PLANT WAREHOUSE (pCi/L)	BKGD-1 (Fairfield) (pCi/L)	BKGD-2 (Miamitown) (pCi/L)
AVERAGE:	1.5	1.0	1.2	0.8	0.9
MAXIMUM:	2.2	1.4	1.6	1.1	1.2
MINIMUM:	0.8	0.3	0.8	0.5	0.5
MEDIAN:	1.5	1.0	1.2	0.8	0.9
STD. DEV:	0.4	0.3	0.2	0.2	0.2

STANDARD LEGEND:1. "(a)" indicates censored data due to erroneous readings.
2. "(b)" indicates data loss due to monitor malfunction.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

ENCLOSURE C

MONTH: AUGUST
YEAR: 1995

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O. Box 538704
Cincinnati, Ohio 45253 Hamilton

SELECTED RADON DATA REPORT
(Monthly Summary of Selected Sampling Locations)

Daily Averages	K65-NW	K65-SW	K65-NE	K65-SE
	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)
08/01/95	2.2	2.2	5.3	4.7
08/02/95	1.4	1.7	3.0	2.1
08/03/95	1.8	2.1	4.8	2.9
08/04/95	1.7	2.4	3.8	2.6
08/05/95	1.3	4.4	1.9	1.8
08/06/95	0.5	1.2	0.9	0.5
08/07/95	1.4	2.0	2.9	1.9
08/08/95	1.1	0.9	2.0	0.9
08/09/95	1.2	1.5	3.6	1.6
08/10/95	1.5	1.3	3.2	1.2
08/11/95	1.1	1.4	4.2	1.3
08/12/95	1.5	1.5	5.8	1.7
08/13/95	1.4	1.9	4.4	1.6
08/14/95	1.5	1.7	5.5	2.7
08/15/95	1.3	1.7	5.2	3.0
08/16/95	1.6	1.7	5.3	2.7
08/17/95	1.4	1.7	4.2	2.8
08/18/95	1.6	1.6	4.6	2.8
08/19/95	1.5	1.6	5.7	3.9
08/20/95	2.2	2.5	4.8	2.9
08/21/95	1.5	1.8	3.9	3.5
08/22/95	1.3	1.5	3.0	2.0
08/23/95	1.4	2.0	4.4	3.0
08/24/95	1.6	2.0	7.1	6.0
08/25/95	1.2	2.5	2.5	1.7
08/26/95	1.6	2.0	4.5	3.7
08/27/95	1.8	2.2	4.6	3.7
08/28/95	1.2	1.6	2.2	1.8
08/29/95	1.5	2.0	6.4	3.8
08/30/95	1.7	2.3	7.8	4.6
08/31/95	1.6	2.0	7.6	4.0

Monthly Statistics	K65-NW	K65-SW	K65-NE	K65-SE
of Daily Averages:	(pCi/L)	(pCi/L)	(pCi/L)	(pCi/L)
AVERAGE:	1.5	1.9	4.4	2.7
MAXIMUM:	2.2	4.4	7.8	6.0
MINIMUM:	0.5	0.9	0.9	0.5
MEDIAN:	1.5	1.8	4.4	2.7
STD. DEV	0.3	0.6	1.6	1.2

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

PERIOD ENDING AUGUST 31, 1995

ENCLOSURE D

EFFLUENT RADIATION DISCHARGES TO THE GREAT MIAMI RIVER

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

Introduction

Enclosure D lists monthly discharges to the Great Miami River. This information is required by the DOE/U.S. EPA Agreement Resolving Dispute Concerning Denial of Request for Extension of Time to Submit Operable Unit 2 Document and discussed in the "Addendum No. 1 to the South Groundwater Contamination Plume Removal Action Parts 2 and 3 Work Plan."

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [SP1]
IAWWT - T108 (SWRB) Discharge
Interim Advanced Wastewater Treatment Effluent

DATE: JULY 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kgs)	TSS (mg/l)	pH (MIN) (S.U.)	pH (MAX) (S.U.)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11	System not in service due to delay in receiving replacement parts.							
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
Total								

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: [SP1] IAWWT - T108

DATE: JULY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	0.000	ERR	ERR	ERR	ERR
Max.	0.000	ERR	ERR	ERR	ERR
Min.	0.000	ERR	ERR	ERR	ERR

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

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CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [SP1]
IAWWT - T109 (SWRB) Discharge
Interim Advanced Wastewater Treatment Effluent

DATE: JULY 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kgs)	TSS (mg/l)	pH (MIN) (S.U.)	pH (MAX) (S.U.)
1	0.181	2.3	7.7	3.4	0.0023 <	2.0	8.6	9.1
2	0.177	2.1	7.2	3.3	0.0022 <	2.0	8.5	9.0
3	0.156	2.7	7.9	2.4	0.0014	3.6	8.7	9.1
4	0.179	2.2	7.7	3.8	0.0026 <	2.0	9.0	9.5
5	0.151	1.5	6.1	2.4	0.0014	3.6	9.3	9.5
6	0.154	2.2	6.8 •	2.8	0.0016 •	2.0	9.5	9.8
7	0.145	1.4	5.8	1.5	0.0008 <	2.0	9.0	9.1
8	0.173	1.3	6.6	2.0	0.0013 <	2.0	8.2	8.5
9	0.140	1.6	9.1	2.8	0.0014 <	2.0	8.2	8.6
10	0.170	2.3	8.4	3.4	0.0022 <	2.0	8.2	8.6
11	0.187	2.1	7.7	2.9	0.0021 <	2.0	8.5	8.6
12	0.149	4.5	11.0	6.9	0.0039	3.6	8.5	8.6
13	0.160	1.6	7.8	2.3	0.0014 <	2.0	8.4	8.5
14	0.138	2.4	7.4	3.1	0.0016 <	2.0	8.3	8.5
15	0.154	1.8	9.1	3.0	0.0017 <	2.0	8.4	8.6
16	0.166	1.8	8.0	2.6	0.0016 <	2.0	8.5	8.9
17	0.161	2.5	7.6	3.7	0.0023 <	2.0	8.1	8.7
18	0.067	2.1	6.7	3.1	0.0008	2.4	8.0	8.2
19	0.000							
20	0.000							
21	0.078	1.9	7.3	2.6	0.0008 <	2.0	8.0	8.6
22	0.171	2.7	7.2	4.6	0.0030 <	2.0	8.3	8.4
23	0.157	2.4	7.2	3.1	0.0018 <	2.0	8.0	8.8
24	0.178	0.8	4.7	1.0	0.0007 <	2.0	9.3	9.5
25	0.175	2.2	6.6	2.1	0.0014 •	2.0	9.3	9.5
26	0.162	2.2	7.3	3.1	0.0019 <	2.0	8.5	9.3
27	0.182	2.6	8.1	2.7	0.0019 <	2.0	8.2	8.3
28	0.181	1.8	8.1	3.1	0.0021 <	2.0	8.2	8.2
29	0.181	2.1	7.7	3.1	0.0021 <	2.0	8.2	8.2
30	0.179	1.4	6.7	1.7	0.0012 <	2.0	8.2	8.3
31	0.172	1.5	5.7	1.8	0.0012 <	2.0	8.3	8.5
Total	4.624				0.0506			

• No sample collected; average monthly value used for calculations.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: [SP1] IAWWT - T109

DATE: JULY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	0.149	2.1	7.4	2.9	0.0017
Max.	0.187	4.5	11.0	6.9	0.0039
Min.	0.000	0.8	4.7	1.0	0.0007

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [606]
SWRB Pump Station Discharge
Stormwater Retention Basin Effluent

DATE: JULY 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kgs)
1	0.181	150	77	260	0.18
2	0.177	150	76	270	0.18
3	0.156	170	74	270	0.16
4	0.179	160	78	290	0.20
5	0.151	180	66	290	0.17
6	0.154	170	60	310	0.18
7	0.145	150	69	260	0.14
8	0.173	200	92	350	0.23
9	0.140	260	130	450	0.24
10	0.170	220	110	410	0.26
11	0.187	200	91	330	0.23
12	0.149	130	77	240	0.14
13	0.160	220	87	340	0.21
14	0.138	140	91	340	0.18
15	0.154	190	100	320	0.19
16	0.166	200	75	310	0.19
17	0.161	180	86	310	0.19
18	0.000				
19	0.000				
20	0.000				
21	0.128	160	68	290	0.14
22	0.603	200	74	340	0.78
23	0.157	180	79	300	0.18
24	0.214	140	91	260	0.21
25	0.607	190	89	290	0.67
26	0.248	190	100	320	0.30
27	0.227	190	100	320	0.27
28	0.204	190	85	320	0.25
29	0.193	200	79	320	0.23
30	0.185	160	47	260	0.18
31	0.172	140	59	240	0.16
	5.679				6.62

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CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: (606) SWRB

DATE: JULY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	0.183	182	83	308	0.24
Max.	0.607	260	130	450	0.78
Min.	0.000	130	47	240	0.14

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [605]
Biodenitrification Tower
BDN Tower Effluent

DATE: JULY 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kgs)
1	0.184	190	2000	550	0.38
2	0.185	170	1800	500	0.35
3	0.180	130	1500	400	0.27
4	0.185	100	1400	400	0.28
5	0.198	180	1600	460	0.34
6	0.138	110	1300	470	0.25
7	0.102	180	1600	510	0.20
8	0.183	240	1600	580	0.40
9	0.203	230	1500	630	0.48
10	0.123	270	1700	780	0.36
11	0.000				
12	0.000				
13	0.000				
14	0.000				
15	0.000				
16	0.000				
17	0.000				
18	0.000				
19	0.000				
20	0.075	250	1700	750	0.21
21	0.186	300	2200	850	0.60
22	0.215	320	2800	950	0.77
23	0.222	330	2600	1100	0.92
24	0.189	430	3100	910	0.65
25	0.198	330	3000	850	0.64
26	0.185	490	3700	1000	0.70
27	0.188	360	2700	830	0.59
28	0.125	340	2900	840	0.40
29	0.179	400	2800	840	0.57
30	0.186	160	2800	880	0.62
31	0.164	140	3000	870	0.54
Total	3.793				10.54

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: (605) BDN/ETS

DATE: JULY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	0.122	261	2283	734	0.48
Max.	0.222	490	3700	1100	0.92
Min.	0.000	100	1300	400	0.20

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [605]
Biodenitrification Tower
BDN Tower Effluent

DATE: JULY 1995

Day	C-BOD5 (mg/l)	TSS (mg/l)	NH3-N (mg/l)	NO3-N (mg/l)	Chromium (ug/l)	Copper (ug/l)	Nickel (ug/l)	Hex-Chrom (ug/l)
1								
2								
3								
4	5.94							
5		5	0.28	38.6 <	6.0	18.1 <	17.0 <	6.0
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20		8 <	0.10	41.8 <	6.0 <	14.0 <	17.0 <	6.0
21	8.67							
22								
23		9 <	0.10	34.3 <	6.0 <	14.0 <	17.0 <	6.0
24								
25	7.73							
26								
27								
28								
29								
30								
31								

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [SP2]
Stormwater Retention Basin Emergency Bypass
SWRB Bypass Effluent

DATE: JULY 1995

Day	Flow (MGD)
1	0.000
2	0.000
3	0.000
4	0.000
5	0.000
6	0.000
7	0.000
8	0.000
9	0.000
10	0.000
11	0.000
12	0.000
13	0.000
14	0.000
15	0.000
16	0.000
17	0.000
18	0.000
19	0.000
20	0.000
21	0.000
22	0.000
23	0.000
24	0.000
25	0.000
26	0.000
27	0.000
28	0.000
29	0.000
30	0.000
31	0.000
Total	0.000

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CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: Valve House
South Groundwater Contamination Plume

DATE: JULY 1995

Day	Flow (MGD)	Total U (ug/l)	Total U (kgs)
1	2.031	17.1	0.13
2	2.083	16.4	0.13
3	1.990	19.7	0.15
4	2.024	• 15.2	0.12
5	1.997	16.2	0.12
6	2.042	17.4	0.13
7	2.067	12.7	0.10
8	1.970	12.3	0.09
9	2.078	11.8	0.09
10	1.973	17.0	0.13
11	2.159	18.1	0.15
12	1.870	17.5	0.12
13	2.632	17.7	0.18
14	1.439	• 15.2	0.08
15	1.941	• 15.2	0.11
16	1.938	• 15.2	0.11
17	2.165	18.0	0.15
18	2.008	17.1	0.13
19	2.096	19.1	0.15
20	1.870	16.6	0.12
21	2.036	17.6	0.14
22	2.055	17.8	0.14
23	1.776	17.2	0.12
24	1.978	17.5	0.13
25	2.150	16.6	0.14
26	2.076	17.4	0.14
27	1.900	16.7	0.12
28	2.010	17.8	0.14
29	2.069	18.3	0.14
30	2.053	19.4	0.15
31	2.027	18.1	0.14
Total	62.503		3.97

• No sample collected; average monthly value used for calculations.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: South Plume

DATE: JULY 1995

	Flow (MGD)	Total U (ug/l)(2)	Total U (kgs)
Avg.	2.016	16.8	0.13
Max.	2.632	19.7	0.18
Min.	1.439	11.8	0.08

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT RADIATION REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [SP3]
Valve House
South Plume/Stormwater Retention Basin */BDN-ETS **

DATE: JULY 1995

Day	Flow (MGD)	Total Alpha (pCi/l)	Total Beta (pCi/l)	Total U (ug/l)	Total U (kgs)	TSS (mg/l)	pH (Grab) (S.U.)
1	2.396	22	56	37	0.34		7.5
2	2.445	23	70	38	0.35		7.5
3	2.326	21	58	39	0.34		7.4
4	2.388	21	45	40	0.36		7.0
5	2.346	28	71	44	0.39		7.3
6	2.334	28	46	45	0.40 <	2.0	7.3
7	2.314	20	45	45	0.39		7.3
8	2.326	19	63	46	0.40		7.2
9	2.421	26	79	50	0.46		7.2
10	2.266	30	71	49	0.42		7.3
11	2.346	27	23	48	0.43		7.2
12	2.019	30	20	50	0.38		7.0
13	2.792	15	23	52	0.55 <	2.0	6.6
14	1.577	21	20	51	0.30		6.8
15	2.095	28	33	53	0.42		7.7
16	2.104	25	22	49	0.39		6.4
17	2.326	29	16	50	0.44		6.7
18	2.008	31	29	36	0.27		6.3
19	2.096 <	12	18	22	0.17		6.8
20	1.945	14	45	18	0.13	2.0	6.6
21	2.350	16	57	27	0.24		7.2
22	2.873	23	82	39	0.42		6.6
23	2.155	21	82	35	0.29		6.8
24	2.381	21	72	31	0.28		6.7
25	2.955	23	75	34	0.38		6.8
26	2.509	24	79	36	0.34		6.6
27	2.315	18	80	34	0.30 <	2.0	6.4
28	2.339 <	12	66	32	0.28		6.7
29	2.441	20	60	31	0.29		7.3
30	2.424	14	76	27	0.25		7.2
31	2.363	17	78	25	0.22		7.1
Total	71.975				10.64		

* Effective 3/11/94, the SWRB discharges were combined with the South Plume.
** Effective 1/27/95, the BDN-ETS discharges were routed from MH #175 to the AWWT.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: [SP3] Valve House

DATE: JULY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	2.322	22	55	39	0.34
Max.	2.955	31	82	53	0.55
Min.	1.577	12	16	18	0.13

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [SP4]
Parshall Flume
Effluent Downstream of Manhole 176B.

DATE: JULY 1995

Day	Flow (MGD)	DO (mg/l)	IRON (mg/l)	MANGANESE (mg/l)
1	0.000	0.0	0.00	0.0
2	0.000	0.0	0.00	0.0
3	0.000	0.0	0.00	0.0
4	0.000	0.0	0.00	0.0
5	0.000	0.0	0.00	0.0
6	0.000	0.0	0.00	0.0
7	0.000	0.0	0.00	0.0
8	0.000	0.0	0.00	0.0
9	0.000	0.0	0.00	0.0
10	0.000	0.0	0.00	0.0
11	0.000	0.0	0.00	0.0
12	0.000	0.0	0.00	0.0
13	0.000	0.0	0.00	0.0
14	0.000	0.0	0.00	0.0
15	0.000	0.0	0.00	0.0
16	0.000	0.0	0.00	0.0
17	0.000	0.0	0.00	0.0
18	0.000	0.0	0.00	0.0
19	0.000	0.0	0.00	0.0
20	0.000	0.0	0.00	0.0
21	0.000	0.0	0.00	0.0
22	0.000	0.0	0.00	0.0
23	0.000	0.0	0.00	0.0
24	0.000	0.0	0.00	0.0
25	0.000	0.0	0.00	0.0
26	0.000	0.0	0.00	0.0
27	0.000	0.0	0.00	0.0
28	0.000	0.0	0.00	0.0
29	0.000	0.0	0.00	0.0
30	0.000	0.0	0.00	0.0
31	0.000	0.0	0.00	0.0
Total	0.000			

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT RADIATION REPORT (cont.)

FACILITY: Fernald Environmental Management Project

LOCATION: [SP4] Parshall Flume

DATE: JULY 1995

	Flow (MGD)	Total Alpha(2) (pCi/l)	Total Beta(2) (pCi/l)	Total U (ug/l)(2)	Total U (kgs)
Avg.	0.000	ERR	ERR	ERR	0.00
Max.	0.000	ERR	0.0	ERR	0.00
Min.	0.000	ERR	0.0	ERR	0.00

Comments: (1) The activity of this discharge has been and will continue to be reported as Uranium-238 (pCi/l) in accordance with the Ohio EPA format for reporting uranium. Since this does not account for the activity of the other uranium isotopes in the effluent, the total uranium data is also presented. The calculated total U-238 is based on a conversion factor of 337.84 pCi U-238/mg Total U applied to the measured value of total uranium.

(2) Average values presented are flow-weighted.

CONSOLIDATED CONSENT AGREEMENT/FEDERAL FACILITY COMPLIANCE AGREEMENT/FEDERAL FACILITY AGREEMENT FOR CONTROL AND ABATEMENT OF RADON-222 EMISSIONS MONTHLY PROGRESS REPORT

Period Ending August 31, 1995

EFFLUENT REPORT

FACILITY: Fernald Environmental Management Project
U.S. Department of Energy
7400 Willey Road, P.O.Box 398705
Cincinnati, Ohio 45239-8705
9002 M 9501 900212

LOCATION: [SP4]
Parshall Flume
Effluent Downstream of Manhole 176B

DATE: JULY 1995

Day	DO (mg/l)	IRON (mg/l)	MANGANESE (mg/l)
1			
2			
3			
4			
5			
6	7.8	2.70	0.3
7			
8			
9			
10			
11			
12			
13	7.2	0.44	0.1
14			
15			
16			
17			
18			
19			
20	7.0	0.06	< 0.1
21			
22			
23			
24			
25			
26			
27	7.7	0.06	< 0.1
28			
29			
30			
31			